

REMARKS

The IDS reference WO 2005/016654 was cited in the ISR and should have been transmitted to the PTO by WIPO in accordance with regular PCT procedure. Since it apparently is not in the file, another copy and an art listing form is attached hereto.

A new inventor declaration is submitted herewith.

The typographical errors in claims 5, 17 and 24 have been corrected. It is respectfully submitted that as a result of these corrections, the claim objection and rejection under 35 USC § 112 can be withdrawn.

Claim 9 has been amended in accordance with the paragraph numbered [0016] in the publication of the application.

Claims 1-17 and 22-24 were rejected under 35 USC § 102 over Schmidt. This rejection is respectfully traversed.

The statement of the reasons for these rejections characterizes Schmidt as teaching intaglio inks and printing. While the title of the patent uses the word "intaglio", everything else in this reference indicates the inks and printing are rotogravure. Intaglio and gravure are distinct types of inks and one skilled in the art would immediately recognize the use of the word "intaglio" in the title is a mistake and would ignore it. As observed in the case of *In re Yale*, 168 U.S.P.Q. 46 (CCPA 1970),

Since [the skilled person would recognize when reading the reference] an obvious error, it cannot be said that one of ordinary skill in the art would do anything more than mentally disregard [the error] as a misprint or mentally substitute [a correction] in its place. Certainly, he would not be led by the...error to use the erroneous [material] even if as a chemist of ordinary skill in the art he would know how to prepare the [material]. He simply would not get so far in the thought process as to determine if he knew how to make [the disclosed entity], as it would have long since been discarded by him as an obvious...error.

If Schmidt meant intaglio, something in the text would have been indicative of that fact. As indicated in the attached Declaration, the working example in Schmidt asserted to be intaglio printing in the Office Action (even though the example itself refers to gravure) is gravure printing.

In intaglio printing, ink is applied under pressure to the engraved surface of a cylinder and the ink on the planar surface is then thoroughly wiped before the printing is carried out. The ink composition is crucial to removing the surplus ink from the planar surface as well as a small amount of ink from the surface of the ink in the engravings, so that the only ink on the engraved cylinder is in the engravings. The substrate to be printed is then passed between the engraved cylinder and an impression material to deform the impression material, forcing the substrate into the engravings on the engraved cylinder. This results in the substrate picking up some ink, corresponding to the engravings on the surface of the engraved cylinder. The ink then has to be dried. Plainly, the rheology of the ink is critical to its success.

In addition to the rheology and ease of removal of surplus ink, intaglio printing inks must meet the following requirements: (1) they must remain on the engraved

cylinder until the moment of printing and then must transfer readily and in a consistent manner to the substrate to be printed, (2) they must have good film-forming properties and the cured inks must be sufficiently flexible that they remain intact even when the printed matter (e.g. banknotes) is subject to abuse, (3) once the substrate has been printed, the ink must not transfer back to other surfaces with which it may come into contact, especially other printed matter, (4) the cured ink must have excellent chemical and mechanical resistance so as to withstand the many diverse materials and conditions to which banknotes may be subject, (5) it must be safe for handling by all members of the public, including the very young, (6) it must be easily cleaned from the surface of a wiping cylinder, (7) it must have non-offsetting properties, (8) it must have the outstanding chemical and mechanical resistance required by international and US printing authorities, and (9) it must have acceptable toxicologic and environmental properties. See, the opening paragraphs of this application and [0003] - [0015] of Veya.

Not surprisingly, it is difficult to meet all of these requirements simultaneously, and inks appropriate for other types of printing are inappropriate for intaglio printing. As Veya points out, intaglio and gravure processes "rely on a different type of ink." [0003]. Likewise, Ghioghiu states that the characteristics required "distinguishes inks suitable for use as Intaglio inks from other printing inks." Page 1, lines 20-21.

Beyond the foregoing, Schmidt discloses a variety of photoinitiators, only some of which are phosphine oxides, and some of which fluoresce. For example, it suggests the initiator can be a thioxanthone which the present application shows both fluoresces and has a very poor cure in an intaglio ink. That means even for the gravure inks of the reference, one must pick and choose a photoinitiator. Moreover, even if one picks a

phosphine oxide by serendipity, the result would be a gravure ink and not an intaglio ink, as claimed.

Since Schmidt only teaches gravure inks and gravure printing, and a variety of initiators, some of which fluoresce and some do not, any assertion that it anticipates claims to intaglio inks and printing without fluorescence is untenable.

The Office Action refers to Table 5, Ex. No. 4 as not visibly fluorescing under UV light. Since there is nothing in Schmidt from which that assertion could be based, it is clearly speculation, and it is in fact wrong. The photoinitiator in that example is an equal mixture of two photoinitiators, one of which fluoresces, as set forth in the attached Declaration.

Those skilled in this art know how to make an intaglio ink containing a photoinitiator. Veya is one example of this. Nevertheless, nothing in Schmidt suggests that acylphosphine oxides may be used as an initiator in intaglio printing inks, nor that they and the resulting intaglio inks do not fluoresce in the visible region under UV light. Nothing permits the skilled person to predict this surprising and unexpected result.

Claims 18-19 were rejected under 35 USC § 103 over Schmidt in view of Veya and claim 20 over Schmidt in view of Veya and Ghioghiu. Both rejections are respectfully traversed.

Schmidt has been discussed above. Veya has been cited only for the substrate being paper or the document produced being a security document while Ghioghiu only for the document being a banknote. They are thus not asserted to cure the basic

deficiencies in Schmidt, and in fact, they do not do so. Both fail to teach or suggest the use of a phosphine oxide as a photoinitiator in an intaglio ink.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

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